

**COLLABORATIVE COPY EXACTLY AUTOMATED DATABASE AND
APPLICATION WEB AUDIT TOOL**

A thesis submitted to the Graduate School in partial fulfillment of the
requirement for the degree Master of Science (Information Technology)
Universiti Utara Malaysia

By

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ABSTRAK

Fungsi utama sokongan Global IT INTEL ialah untuk memastikan kesinambungan proses manufaktur sentiasa berterusan. Untuk mencapai keperluan seperti mana yang dikehendaki dalam Persetujuan Taraf Perkhidmatan (SLA), Copy Exactly (CE!) merupakan satu alat perisian yang sangat penting untuk melicinkan kerja sokongan sistem. Ia digunakan untuk menyalin atur cara IT tepat-tepat sekali dari satu lokasi ke semua lokasi lain. Ia merangkumi lokasi kilang dari Chengdu, Costa Rica, Kulim, Penang dan Arizona yang menghasilkan chip silikon dan CPU.

Tesis ini akan membicarakan kerja untuk mencapai piawai yang berkualiti dalam Database dan Application CE! yang khusus and boleh diukur. Projek ini adalah menghasilkan automatic alat perisian kesanggupan CE! yang dapat mengimbas semua server dari seluruh lokasi Intel dan menghasilkan laporan audit tanpa menggunakan alat perisian komersil yang mahal. Laporan CE! Automatic akan memimpin global configuration management (CM) dan memberi kemajuan dalam Information Technology Infrastructure Library (ITIL). Ia juga mendorong perbaikan yang berterusan untuk menghasilkan servis dengan kos yang cekap, masa yang tepat dan berkesan. CE! dapat memastikan semua atur cara IT adalah mengikuti Configuration Items (CIs) yang tercatat dalam piawaian manufaktur Intel. CIs merupakan struktur asas atur cara pengurusan system seperti dokumen keperluan, perisian, model, rancangan and manusia.

ABSTRACTS

Global IT supports team setup to support business continuity in INTEL Manufacturing environment, Copy Exactly (CE!) is very important to make ease of operation and support to achieve system up time agreed in Services Level Agreement (SLA). CE! means duplicate over the IT configuration items from one site to all of the sites. It covers Chengdu, Costa Rica, Kulim, Penang and Arizona site which doing chips and CPU manufacturing.

This article is about what has to be done to achieve a specific and measurable Database and Application CE! quality standard: it isn't about using any estimated costly project management tool. Instead, it is an own development with CE! automated web capability tool that able to scan over all supported servers and provide a CE! audit reports in all of the sites at Intel Organization. With implementing the CE! Automated report will lead the global configuration management implementation and continuous improvement participates in designing Information Technology Infrastructure Library (ITIL) Configuration Management Implementation process. It also drive continues improvement within the area of responsibility to ensure cost efficient, timely and effective services. The CE! will ensure all Configuration Items (CIs) setup with following IT standard define in INTEL manufacturing. Configuration Items (CIs) are referring to the fundamental structural unit of a configuration management system. Examples of CIs include individual requirements documents, software, model, plan and people.

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LIST OF ABBREVIATION

ANT	Actor-Network Theory
APMG	APM Group
APPs	Applications
ATM	Assembly & Test Manufacturing
CCTA	Central Computer and Telecommunications Agency
CE!	Copy Exactly
CIs	Configuration Items
CM	Change Management
COBIT	Control Objectives for Information and related Technology
DBs	Databases
DSS	Decision Support System
EIs	Examination Institutes
ICMB	ITIL Certification Management Board
IT	Information Technology
ITIL	Information Technology Infrastructure Library
itSMF	IT Service Management Forum International
MOF	Microsoft Operations Framework
OGC	Office of Government Commerce
OPP	Obligatory Passage Point
SOX	Sarbanes Oxley
TSO	The Stationery Office

CHAPTER 1

BACKGROUND OF THE STUDY

1.0. Introduction

Decision Support System (DSS) Hub does a Database & Application Setup and Administration for Assembly & Test Manufacturing (ATM) environment. DSS Hub supports most of the mission critical instances of Application (Apps) and Database (DB) for multiple sites including Penang, Kulim, Chengdu and Costa Rica. DSS Hub has about a total of 120 Apps/DBs for all sites which covers 30 Apps/DBs per site; Thus DB and Apps Audit is important to ensure all supported DB and Apps are aligning with IT standard's configuration.

In current practice; the team will do a manual audit with referring to the Apps/DB's checklist release in new version of upgrade. The release checklist created by Level 3 engineering group and its design in excel format which consisted all required Configuration Items (see Appendix A). With using this manual approach, it will spend extra time, efforts and delays the system deployment's schedule. Other than that, it does not provide accurate audit's result that will cause production long down due to the system configuration not compliance with Information Technology (IT) standard. It also waste of time to form a team to do a quarterly audit for > 1000 Apps/DBs for all of sites to compliance with cooperate Sarbanes Oxley (SOX) audit.

1.1. Problem Background

Nowadays, having 24 Hours global IT operation support in level 1 and 2 is critical for larger enterprises and small business. The "follow the sun" model

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